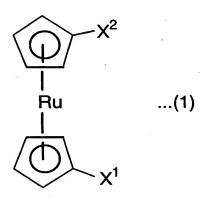
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CLAIMS

1. A ruthenium compound for chemical vapor deposition which is at least one compound selected from the group consisting of a compound represented by the following formula (1):



wherein X^1 and X^2 are each independently a hydrogen atom, fluorine atom, trifluoromethyl group, pentafluoroethyl group or group represented by the following formula (1)-1:

$$-\text{Si} \stackrel{\text{R}^1}{\underset{\text{R}^3}{\overset{}}} \dots (1)^{-1}$$

wherein R^1 , R^2 and R^3 are each independently a hydrocarbon group having 1 to 10 carbon atoms,

15 with the proviso that X^1 and X^2 cannot be hydrogen atoms at the same time,

a compound represented by the following formula (2):

 $Ru(OCOR^4)_3$ (2)

wherein R⁴ is a trifluoromethyl group or hydrocarbon group 20 having 1 to 10 carbon atoms, and three R⁴'s may be the same or different,

a compound represented by the following formula (3):

$$YRu(CO)_3$$
 (3)

wherein Y is a cyclopentadienyl, cyclohexadienyl,

25 cycloheptadienyl, cyclooctadienyl, butadienyl or

Replan 1

2,3-dimethyl-1,3-butadienyl group, and a compound represented by the following formula (4): $\label{eq:YRuHnLm} \text{YRuH}_nL_m \tag{4}$

wherein Y is as defined in the above formula (3), L is a carbonyl group, methyl group or ethenyl group, n is an integer of 1 to 4, and m is an integer of 0 to 2, with the proviso that n + m is 3 or 4, and two L's may be the same or different when m is 2.

10 2. A process for producing a metal ruthenium film from the ruthenium compound of claim 1 by chemical vapor deposition.